

Chest Heated Finishers

24 inch (600 mm) Models and 32 inch (800 mm) Models

Refer to Page 2 for Model Identification

— Installation/Operation —

Keep These Instructions for Future Reference.

(If this machine changes ownership, this manual must accompany machine.)



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Part No. 1800000R2
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Introduction

Model Identification

Information in this manual is applicable to these models:

UL24F118
UL24F130
UL24R118
UL24R130
UL24A118
UL24A130
UL32F118
UL32F130
UL32R118
UL32R130
UL32A118
UL32A130

Serial Plate Location

Always provide the machine's serial number and model number when ordering parts or when seeking technical assistance. Refer to *Figure 1* for serial plate location.

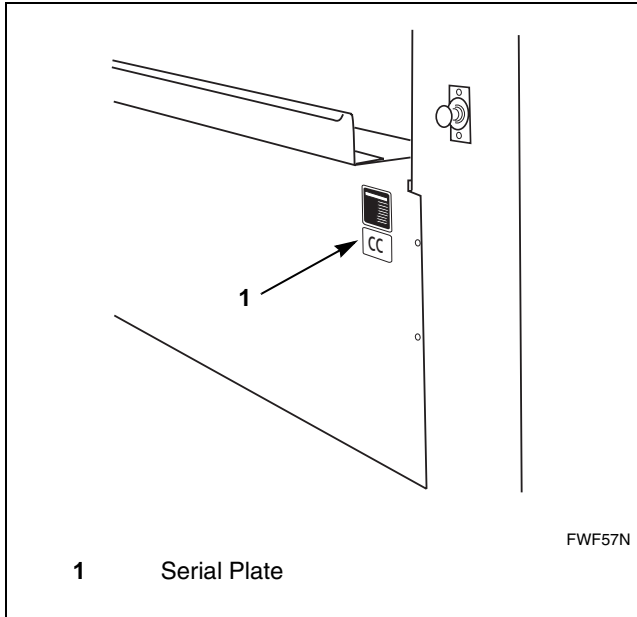


Figure 1

Replacement Parts

If literature or replacement parts are required, contact the source from whom the machine was purchased or contact Alliance Laundry Systems at (920) 748-3950 for the name and address of the nearest authorized parts distributor.

Customer Service

For technical assistance, call the following number:


(920) 748-3121
Ripon, Wisconsin


Safety


Explanation of Safety Messages

Safe operating and maintenance practices presented in this manual are emphasized with special safety messages. These messages are categorized as DANGER, WARNING and CAUTION. Explanations of these categories are listed below.

These safety messages are used throughout this manual to identify safe practices. Signal words are placed with descriptions or steps where the need to maintain safe conditions is critical.

	DANGER
Indicates an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.	

	WARNING
Indicates a hazardous situation that, if not avoided, could cause severe personal injury or death.	

	CAUTION
Indicates a hazardous situation that, if not avoided, may cause minor or moderate personal injury or property damage.	

Safety signs and labels are also placed on the unit. Those signs and labels are limited messages. These signs are to be inspected for readability and replaced when missing, damaged, or unreadable. Refer to the **Maintenance** section of this manual for the periodic maintenance schedule. Refer to the parts manual for ordering information.

IMPORTANT: The word "IMPORTANT" is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.


NOTE: The word "NOTE" is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

The WARNING and IMPORTANT instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and carefulness are factors which CANNOT be built into this finisher. These facts MUST BE supplied by the person(s) installing, maintaining or operating the finisher.

Always contact your dealer, distributor, service agent or the manufacturer on any problems or conditions you do not understand.

Important Safety Instructions

(Save These Instructions)

	<h3>WARNING</h3>
<p>To reduce the risk of fire, electric shock, serious injury or death to persons when using your press, follow these basic precautions:</p>	
<small>W372</small>	

1. Read all instructions before using the finisher.
2. Do not finish articles that have been previously cleaned in, washed in, soaked in, or spotted with gasoline, dry cleaning solvents, or other flammable or explosive substances, as they give off vapors that could ignite or explode.
3. Do not allow children to play on or around the finisher. Close supervision of children is necessary when the finisher is used near children. This is a safety rule for all appliances.
4. Check the operation of the safety finger guard at the beginning of every shift. Operating the safety guard should stop the finisher immediately. If this safety feature is not working properly, employees must shut off the finisher and notify the supervisor. Do not operate the finisher until the safety finger guard is repaired and working properly. Be sure that all other safety features, including guards and panels, are in place before operating the finisher.
5. Never service the finisher while it is running. Never reach over, under, or behind the safety finger guard or into any area near hot surfaces or moving parts without first shutting off the finisher at the switch and power source. Follow this rule whenever working on the finisher to avoid serious injury from the finisher's heat and/or pressure.
6. Never try to remove, adjust, or straighten jammed or misfed linen while the finisher is running. Attempting to clear the jammed linen item can result in the user being caught in the linen and pulled into the finisher. If something is jammed in the finisher, turn off the power before attempting to correct the problem. Avoid contact with heated parts.
7. Protect yourself and fellow workers by making sure that everyone follows all the rules. Read and follow all safety labels and warnings. Learn all aspects of the equipment such as what is hot, which parts move, all safety shut-offs, and all emergency procedures. Do not come close to moving or heated parts. Do not wear loose clothing, sweaters, jewelry, or neck ties when near the finisher.
8. Frequent scheduled safety meetings are a must to review and update rules. If anyone is observed breaking the rules, the supervisor or manager should be notified immediately. Reporting people for rule breaking could save their lives or limbs.
9. Emergency shut-offs such as finger bars and emergency stop switches, should be painted red and clearly labeled.
10. Maintenance personnel should work in a buddy system for mutual protection when working on a finisher.
11. If in doubt, don't. Do not do anything until the supervisor or service-maintenance department has been contacted. Only qualified personnel should service the finisher.
12. Do not install or store the finisher where it will be exposed to water and/or weather.
13. Do not tamper with the controls.
14. Do not repair or replace any part of the finisher or attempt any servicing unless specifically recommended in this installation/operation manual.
15. To reduce the risk of fire, **DO NOT FINISH** plastics or articles containing foam rubber or similarly textured rubber-like materials.
16. Keep area around the exhaust opening and adjacent surrounding area free from the accumulation of lint, dust, and dirt.
17. The interior of the finisher and the exhaust duct should be cleaned periodically by qualified service personnel.
18. If not installed, operated, and maintained in accordance with the manufacturer's instructions, or if there is damage to or mishandling of this product's components, use of this product could expose you to substances in the fuel or from fuel combustion which can cause death or serious illness and which are known to the State of California to cause cancer, birth defects, or other reproductive harm.

Safety

19. To reduce the risk of fire, **DO NOT FINISH** articles which have traces of any flammable substances such as machine oil, vegetable oil, cooking oil, flammable chemicals, thinner, etc. or anything containing wax or chemicals such as in mops and cleaning cloths, or anything dry-cleaned at home with dry-cleaning solvent.
20. **ALWAYS** disconnect the electrical power to the finisher before servicing. Disconnect power by shutting off appropriate breaker or fuse.
21. Install this finisher according to the *Installation* instructions in this manual. All connections for electrical power, grounding, and gas supply must comply with local codes and be made by licensed personnel when required.
22. Do not turn hard or meltable materials into the machine.
23. Do not operate the machine without feed sheets.
24. Do not crawl or walk on the machine.
25. Always wear protective gloves when working at the machine. The beds are hot and hot linen exits the machine.



WARNING

To prevent serious injury or death, read finisher manuals before installing, operating, maintaining, or cleaning the finisher.

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WARNING

To AVOID possible serious injury, BEFORE maintenance or repair tasks:

- **Disconnect all utilities such as gas, electricity and steam.**
- **Allow heated parts and surfaces to cool.**

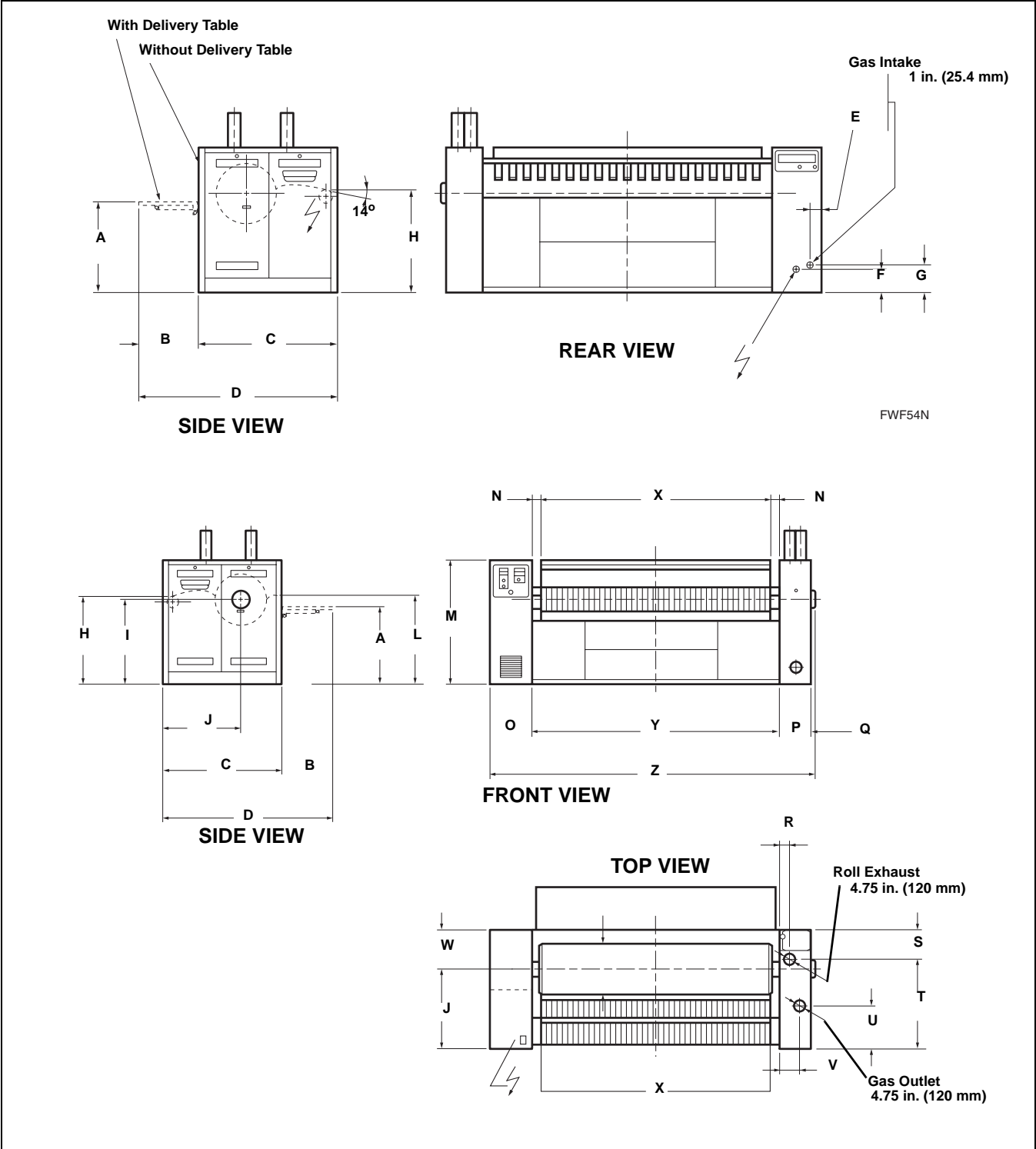
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Installation

Dimensions and Specifications

	UL24*118	UL24*130	UL32*118	UL32*130
Roll Motor *Optional High Speed	2.01 hp (1.5 kW) *2.95 hp *(2.2 kW)	2.01 hp (1.5 kW) *2.95 hp *(2.2 kW)	2.95 hp (2.2 kW) *5.36 hp *(4 kW)	2.95 hp (2.2 kW) *5.36 hp *(4 kW)
Exhaust Motor	1.01 hp (.75 kW)	1.01 hp (.75 kW)	1.01 hp (.75 kW)	1.01 hp (.75 kW)
Hydraulic Pump Motor	.5 hp (.37 kW)	.5 hp (.37 kW)	.5 hp (.37 kW)	.5 hp (.37 kW)
Circulation Pump Motor	4.02 hp (3 kW)	4.02 hp (3 kW)	4.02 hp (3 kW)	4.02 hp (3 kW)
Approx. Shipping Weight	6503 lb. (2950 kg)	7165 lb. (3250 kg)	7605 lb. (3450 kg)	8267 lb. (3750 kg)
Approx. Net Weight	5732 lb. (2600 kg)	6393 lb. (2900 kg)	6834 lb. (3100 kg)	7495 lb. (3400 kg)

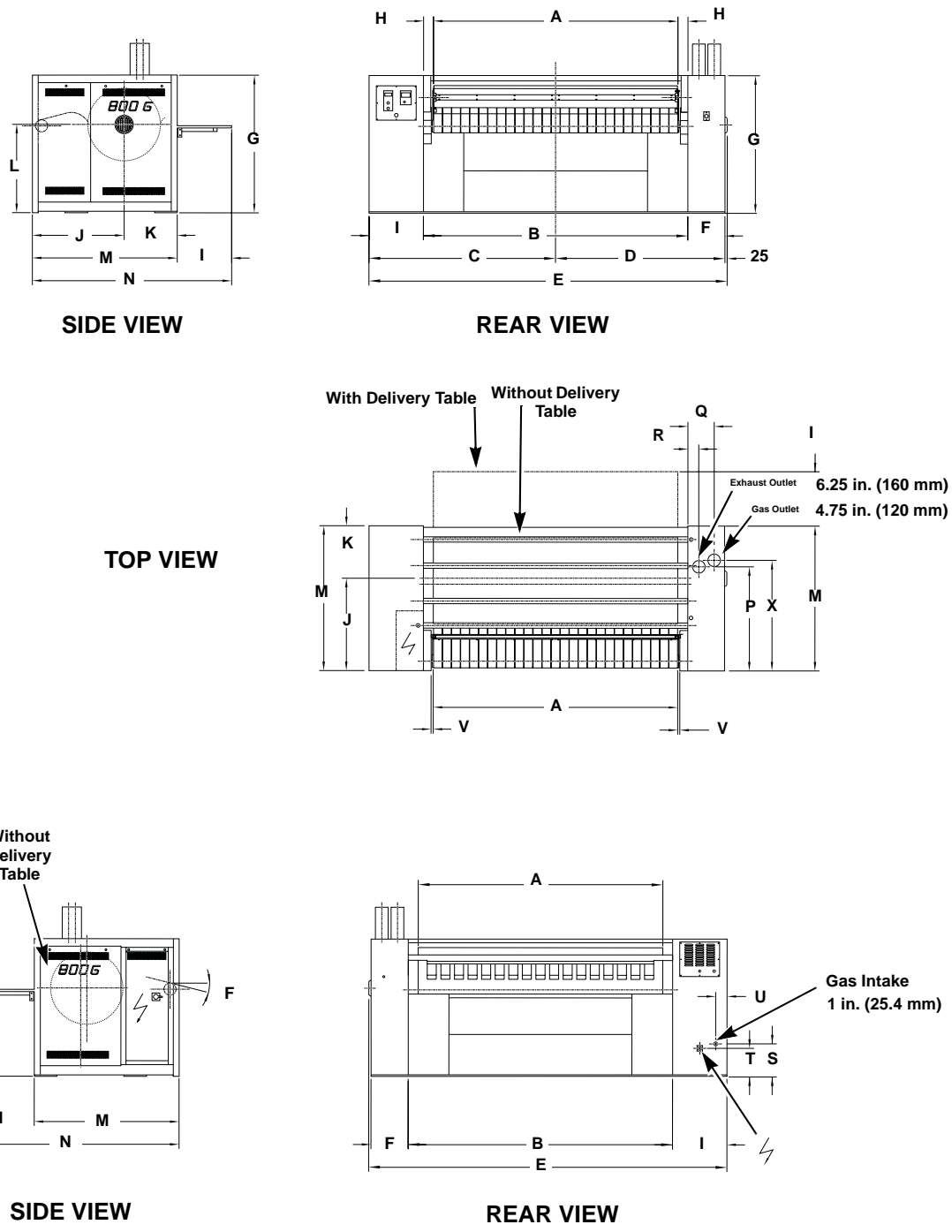
UL24 Models



Dimension		
	UL24*118	UL24*130
A	35.43 in. (900 mm)	35.43 in. (900 mm)
B	23.62 in. (600 mm)	23.62 in. (600 mm)
C	55.11 in. (1400 mm)	55.11 in. (1400 mm)
D	78.74 in. (2000 mm)	78.74 in. (2000 mm)
E	4.13 in. (105 mm)	4.13 in. (105 mm)
F	12.40 in. (315 mm)	12.40 in. (315 mm)
G	14.37 in. (365 mm)	14.37 in. (365 mm)
H	40.55 in. (1030 mm)	40.55 in. (1030 mm)
I	39.17 in. (1030 mm)	39.17 in. (1030 mm)
J	36.22 in. (920 mm)	36.22 in. (920 mm)
K	18.90 in. (480 mm)	18.90 in. (480 mm)
L	40.94 in. (1040 mm)	40.94 in. (1040 mm)
M	57.09 in. (1450 mm)	57.09 in. (1450 mm)
N	4.33 in. (110 mm)	4.33 in. (110 mm)
O	19.68 in. (500 mm)	19.68 in. (500 mm)
P	14.57 in. (370 mm)	14.57 in. (370 mm)
Q	1.77 in. (45 mm)	1.77 in. (45 mm)
R	4.72 in. (120 mm)	4.72 in. (120 mm)
S	13.78 in. (350 mm)	13.78 in. (350 mm)
T	41.39 in. (1050 mm)	41.39 in. (1050 mm)
U	19.88 in. (505 mm)	19.88 in. (505 mm)
V	9.65 in. (245 mm)	9.65 in. (245 mm)
W	18.90 in. (480 mm)	18.90 in. (480 mm)
X	118 in. (3000 mm)	129.92 in. (3300 mm)
Y	126.77 in. (3220 mm)	138.58 in. (3520 mm)
Z	162.79 in. (4135 mm)	174.60 in. (4435 mm)

Table 1

UL32 Model



FWF97N

Dimension		
	UL32*118	UL32*130
A	118 in. (3000 mm)	129.92 in. (3300 mm)
B	126.77 in. (3220 mm)	138.58 in. (3520 mm)
C	87 in. (2210 mm)	93.15 in. (2366 mm)
D	79.53 in. (2020 mm)	85.43 in. (2170 mm)
E	167.52 in. (4255 mm)	179.33 in. (4555 mm)
F	16.14 in. (410 mm)	12.40 in. (315 mm)
G	59.84 in. (1520 mm)	14.37 in. (365 mm)
H	4.33 in. (110 mm)	40.55 in. (1030 mm)
I	23.62 in. (600 mm)	39.17 in. (1030 mm)
J	40.16 in. (1020 mm)	36.22 in. (920 mm)
K	22.83 in. (580 mm)	18.90 in. (480 mm)
L	38.39 in. (975 mm)	40.94 in. (1040 mm)
M	63 in. (1600 mm)	57.09 in. (1450 mm)
N	86.62 in. (2200 mm)	4.33 in. (110 mm)
O	37.80 in. (960 mm)	19.68 in. (500 mm)
P	45.28 in. (1150 mm)	14.57 in. (370 mm)
Q	11.42 in. (290 mm)	1.77 in. (45 mm)
R	4.73 in. (120 mm)	4.72 in. (120 mm)
S	14.37 in. (265 mm)	13.78 in. (350 mm)
T	12.40 in. (315 mm)	41.39 in. (1050 mm)
U	4.92 in. (125 mm)	19.88 in. (505 mm)
V	.90 in. (23 mm)	9.65 in. (245 mm)
W	.98 in. (25 mm)	18.90 in. (480 mm)
X	48.03 in. (1220 mm)	129.92 in. (3300 mm)

Table 2

Pre-Installation Inspection


Upon delivery, visually inspect the packaging and portions of the finisher that are visible through the packaging for shipping damage.

If the package or finisher is damaged or if signs of possible damage are evident, have the carrier note the condition on the shipping papers before the shipping receipt is signed, or advise the carrier of the condition as soon as it is discovered.

IMPORTANT: Lift the box cover off the finisher and check the items listed on the packing list.

Advise the carrier of any damaged or missing articles as soon as possible. A written claim should be filed with the carrier immediately if articles are damaged or missing.

IMPORTANT: Warranty is void unless the finisher is installed according to instructions in this manual. Installation should comply with minimum specifications and requirements detailed in this manual and applicable local gas fitting regulations, municipal building codes, water supply regulations, electrical wiring regulations, and any other relevant statutory regulations. Due to varied requirements, applicable local codes should be thoroughly understood and all pre-installation arranged accordingly.

	WARNING
To prevent fire, explosion, or personal injury, this finisher may only be installed, adjusted, and started up by qualified technicians.	
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Location Requirements

It is strongly recommended that the purchaser be present during installation and the first tests.

To assure compliance, consult and adhere to building/ local code requirements and comply with the following:

- The finisher must be installed in a very well ventilated room (especially when using gas heating) with correct lighting and an ambient temperature in the range from 32°F (0°C) to 104°F (40°C).
- Leveling should be carried out on a hard and stable floor surface, capable of supporting the weight of the finisher. Contact your mechanical engineer for foundation requirements.
- The finisher **MUST NOT** be installed or stored in an area where it will be exposed to water and/or weather.

IMPORTANT: DO NOT block the airflow at the rear of the finisher with laundry or other articles. Doing so would prevent adequate air supply from reaching the combustion chamber of the finisher.

Leave sufficient space around the finisher to allow for correct functioning.

FOR FRONT RETURN MODELS ONLY:

- Allow at least 4 inches (102 mm) in the back to allow for ventilation.
- Allow 32 inches (813 mm) on each side for upkeep and maintenance.
- Allow sufficient space in front so operator can work efficiently and safely.

FOR REAR RETURN MODELS

- Allow sufficient space in front and rear so operator can work efficiently and safely.

Moving Finisher with Crane

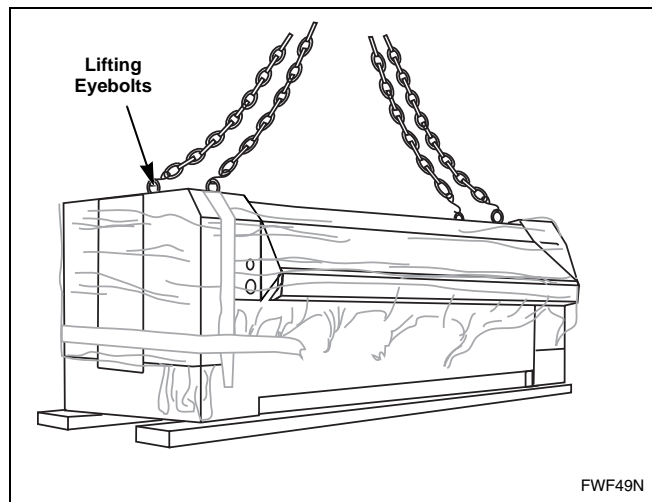


Figure 2

1. Remove any obstacles under machine placement area.
2. Fasten lifting cables to lifting eyebolts. Refer to *Figure 2*.
3. Lift machine.
4. Make sure cable is positioned correctly so that machine hangs horizontally.
5. Lift and relocate machine carefully, without sudden shocks or movements.
6. Place machine on ground, as close to the permanent location as possible.
7. If the machine needs further moving, use forklift or rollers. Refer to ***Moving Finisher with Forklift*** section.

IMPORTANT: To use rollers, place rollers in four corners, distributing weight evenly.

8. Once finisher is in final position, open hydraulic valve to release chest.
9. Remove all packing materials.
10. Level finisher.

Moving Finisher with Forklift

The finisher should be moved with a forklift as close as possible to the area where it will be installed. Use a forklift of sufficient capacity to lift the packaged unit according to the following procedures.

IMPORTANT: DO NOT lift finisher with slings.

1. Position the forklift arms beneath the center of the unit in the built-in forklift slots. Refer to *Figure 3*.

IMPORTANT: Lifting the finisher from either side could cause misalignment and/or damage to the finisher.

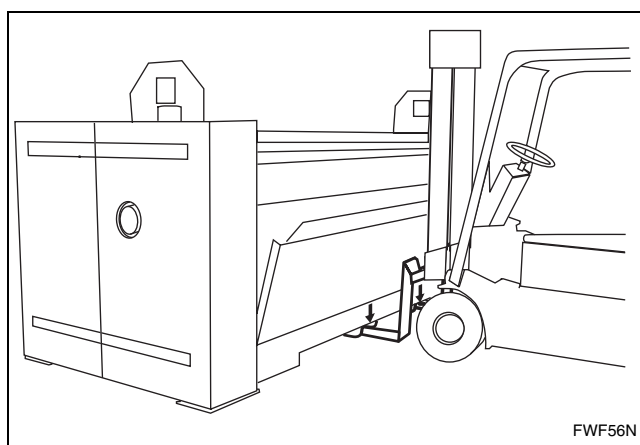


Figure 3

2. Use the forklift to carefully lift the packaged finisher off wooden skids.
3. Move the packaged unit as close as possible to the area where the finisher will be installed.

IMPORTANT: DO NOT lift the unit more than 8 inches (203 mm) off the ground.

4. If the machine needs further moving, place rollers in all four corners of finisher, distributing weight evenly, and roll into place.
5. Once finisher is in final position, open hydraulic valve to release chest.
6. Remove all packing materials.
7. Level finisher.

Electrical Connection

Electrical connections should be made by a qualified electrical contractor in accordance with all applicable local and national requirements. A differential circuit breaker (obtain locally), correctly sized for the power consumption of the finisher, must be installed near finisher. Refer to *Table 3*, *Table 4* and *Table 5*.

IMPORTANT: Electrical specifications in *Table 3*, *Table 4* and *Table 5* are subject to change without notice. Always refer to product serial plate for most current specifications of product being installed.

NOTE: Use copper conductors only.

NOTE: Connect to individual branch circuit.

Electrical Models (CE Approved)			
Serial Plate Rating	Model	Recommended Circuit Breaker	Heater Element
All Voltages	UL24*118	100 Amp	60 kW (80 hp)
	UL24*130	125 Amp	75 kW (101 hp)
	UL32*118	160 Amp	90 kW (121 hp)
	UL32*130	160 Amp	90 kW (121 hp)

Table 3

Gas Models (CSA and CE Approved)		
Serial Plate Rating	Models	Recommended Circuit Breaker
230/50/3 208-240/60/3	UL24*118	60 Amp
	UL24*130	60 Amp
	UL32*118	70 Amp
	UL32*130	70 Amp
400/50/3	UL24*118	40 Amp
	UL24*130	40 Amp
	UL32*118	40 Amp
	UL32*130	40 Amp
440-480/60/3	UL24*118	30 Amp
	UL24*130	30 Amp
	UL32*118	40 Amp
	UL32*130	40 Amp

Table 4

Steam Models (CSA and CE Approved)		
Serial Plate Rating	Models	Recommended Circuit Breaker
230/50/3 208-240/60/3	UL24*118	60 Amp
	UL24*130	60 Amp
	UL32*118	70 Amp
	UL32*130	70 Amp
400/50/3	UL24*118	32 Amp
	UL24*130	32 Amp
	UL32*118	40 Amp
	UL32*130	40 Amp
440-480/60/3	UL24*118	30 Amp
	UL24*130	30 Amp
	UL32*118	40 Amp
	UL32*130	40 Amp

Table 5

Installation

Before proceeding, check for proper rotation of exhaust fan, hydraulic pump and circulation pump. All three should be moving in the direction indicated by the arrow on part. If all three are rotating properly, proceed. If they are not, reverse polarity of component not rotating properly. Refer to *Figure 4*, *Figure 5* and *Figure 6*.

Hydraulic Pump



Figure 4

Exhaust Fan

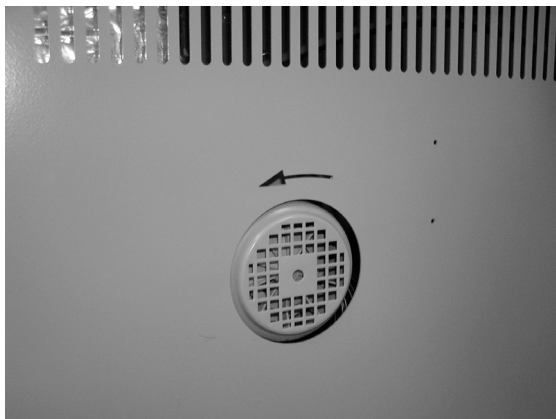


Figure 5

Circulation Pump

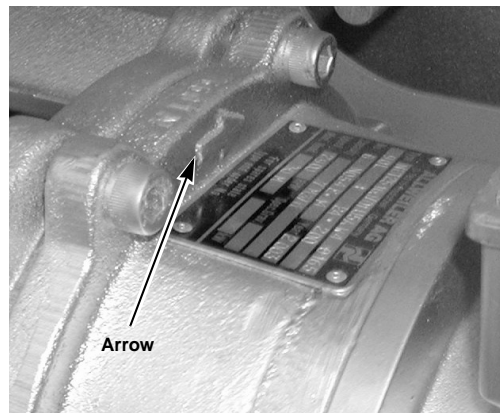


Figure 6

Gas Connection

IMPORTANT: The installation must comply with local codes, the current National Fuel Gas Code, ANSI Z223.1 in the U.S.A., or the current CAN/CSA B149, Installation Codes in Canada.

Install a shut-off valve to isolate gas connections from rest of installation. Gas models must be connected to the existing gas pipes. The gas supply pipe size must have sufficient dimensions to minimize pressure loss. Obtain specific gas supply pipe size from the gas supplier. Refer to *Table 6* for general pipe size.

When connecting to a gas line, an equipment shut-off valve must be installed within 6 feet (1.8 m) of the finisher. A 1/8 inch N.P.T. pipe plug must be installed as shown. Refer to *Figure 7*.

Gas Pipe Size Required for 1,000 BTU Natural Gas 0.64 Specific Gravity at 6.5 ± 1.5 inch (1.62 ± .37 kPa) Water Column Pressure						
Gas Appliances Total Btu/hr.	EQUIVALENT LENGTH					
	25 feet (7.63 m)	50 feet (15.25 m)	75 feet (22.88 m)	100 feet (30.50 m)	125 feet (38.13 m)	150 feet (45.75 m)
	Based on 0.3 Inch Water Column Pressure Drop for Length Given					
100,000	.75 in. (19.1 mm)	.75 in. (19.1 mm)	1 in. (25.4 mm)	1 in. (25.4 mm)	1 in. (25.4 mm)	1 in. (25.4 mm)
200,000	1 in. (25.4 mm)	1 in. (25.4 mm)	1.25 in. (31.8 mm)	1.25 in. (31.8 mm)	1.25 in. (31.8 mm)	1.25 in. (31.8 mm)
300,000	1 in. (25.4 mm)	1.25 in. (31.8 mm)	1.25 in. (31.8 mm)	1.5 in. (38.1 mm)	1.5 in. (38.1 mm)	1.5 in. (38.1 mm)
400,000	1 in. (25.4 mm)	1 in. (25.4 mm)	1.5 in. (38.1 mm)	1.5 in. (38.1 mm)	1.5 in. (38.1 mm)	2 in. (50.8 mm)
500,000	1 in. (25.4 mm)	1.5 in. (38.1 mm)	1.5 in. (38.1 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)
600,000	1.5 in. (38.1 mm)	1.5 in. (38.1 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)
700,000	1.5 in. (38.1 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)	2.5 in. (63.5 mm)
800,000	1.5 in. (38.1 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)	2.5 in. (63.5 mm)	2.5 in. (63.5 mm)
900,000	2 in. (50.8 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)	2.5 in. (63.5 mm)	2.5 in. (63.5 mm)	2.5 in. (63.5 mm)
1,000,000	2 in. (50.8 mm)	2 in. (50.8 mm)	2 in. (50.8 mm)	2.5 in. (63.5 mm)	2.5 in. (63.5 mm)	2.5 in. (63.5 mm)
IMPORTANT: For L.P. (Liquefied Petroleum) gas, correct the total BTU/hour by multiplying it by 0.6. The answer is the equivalent BTU on the above chart.						

Table 6

Installation

Inlet Pressure

Use a manometer to verify that the inlet pressure meets the following requirements:

Natural Gas service must be supplied at a minimum of 8.0 inch water column pressure (1.74 kPa).

L.P. (Liquefied Petroleum) Gas service must be supplied at a minimum of 11 inch water column pressure (2.74 kPa).

Manifold Pressure

To check manifold pressure, use a manometer to verify that the settings of the gas valve correspond with the type of gas being used.

1. Connect the manometer to the pressure connection located on top of the gas valve while the burner is ignited.
2. Read the manometer to determine the pressure of the gas. The measured gas pressure must be equal to the pressure indicated on the finisher's serial plate.
3. Install a pressure regulator valve (obtain locally), suited for the nature and flow rate of the gas used, in the tube system near the finisher.

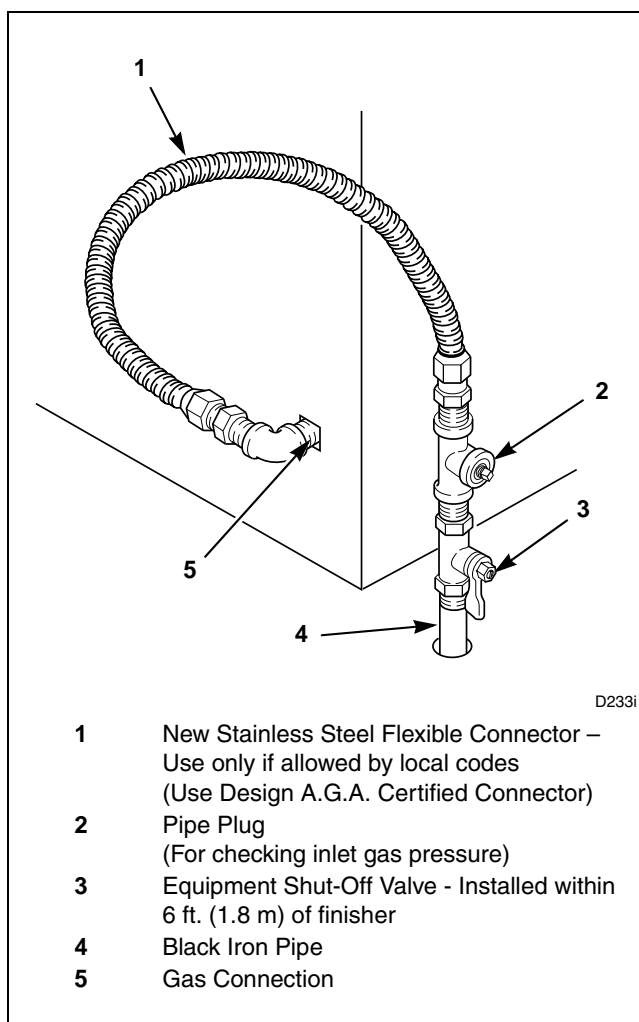


Figure 7

IMPORTANT: Before proceeding, check gas connection for leaks.

Gas Requirements				
	UL24*118	UL24*130	UL32*118	UL32*130
Maximum Gas Input	310,421 Btu (91 kW)	310,421 Btu (91 kW)	643,742 Btu (189 kW)	643,742 Btu (189 kW)
Burner Exhaust (2 stage burner)	153/270 cfm	153/270 cfm	153/270 cfm	153/270 cfm
Burner Exhaust Inches of Water Column	.6/1.6	.6/1.6	.6/1.6	.6/1.6

Table 7

Steam Connection

IMPORTANT: Insulate the steam supply and return lines for the safety of anyone operating or servicing the finisher.

IMPORTANT: Shut-off gate valves must be installed upstream of the steam solenoid valve and downstream of each steam trap so components can be isolated for maintenance or emergency purposes.

IMPORTANT: All components (solenoid valve, traps) must be supported to minimize on the finisher's steam connections.

Steam Connection Requirements


- Obtain specific steam service pipe sizes from a steam system supplier or a qualified steam fitter.
- To prevent condensate draining from headers to finisher, piping should have a minimum 12 inch (305 mm) rise above the respective header. **DO NOT** make a steam connection to the header with a horizontal or downward facing tee or elbows.
- Whenever possible, horizontal runs of steam lines must drain (by gravity) to the respective steam header. Water pockets, or an improperly drained steam header will provide wet steam, causing improper operation of the finisher. If pockets or improper drainage cannot be eliminated, install a bypass trap to drain condensate from the low point in the steam header to the return.
- In the steam supply and condensate return lines, it is recommended that each have a pipe union and globe valve for disconnection of the steam to service to finisher.
- Before connecting the trap and check valve to the finisher, open the shut-off valve in steam supply line and allow steam to flow through the finisher to flush out any debris. This will assure proper operation of the trap when it is connected.
- After flushing the system, install a vacuum breaker, an inverted bucket trap (with built-in strainer), and a check valve. For successful operation of the finisher, install the trap 18 inches (457 mm) below the inlet and as close to the finisher as possible. Inspect the trap carefully for inlet and outlet markings and install according to the trap manufacturer's instructions. If steam is gravity returned to the boiler, omit the trap but install the vacuum breaker and check valve in the return line near the finisher. Gravity return requires the entire return plumbing to be below the finisher steam outlets.
- Install the union and shut-off valve in the return line and make the final pipe connections to the return header.

NOTE: To prevent water hammering, route the return lines below the steam outlets.

Steam Pressure and Connection Size				
	UL24*118	UL24*130	UL32*118	UL32*130
Steam Pressure Minimum - Maximum	120-150 psi (8-10 bar)	120-150 psi (8-10 bar)	120-150 psi (8-10 bar)	120-150 psi (8-10 bar)
Steam Inlet	1 in. (25.4 mm)	1 in. (25.4 mm)	1.25 in. (31.75 mm)	1.25 in. (31.75 mm)
Condensate Return	.75 in. (19.05 mm)	.75 in. (19.05 mm)	1 in. (25.4 mm)	1 in. (25.4 mm)

Table 8

Exhaust Requirements



WARNING

Finisher produces combustible lint. To reduce the risk of fire, the finisher must be exhausted to the outdoors.


To reduce the risk of fire and accumulation of combustible gases, DO NOT exhaust finisher air into a window well, gas vent, chimney or enclosed, unventilated area such as an attic wall, ceiling, crawl space under a building, or concealed space of a building.

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Whenever possible, install the finisher along an outside wall where duct length can be kept to a minimum and make-up air can be easily accessed. Construction must not block the airflow at the rear of the finisher. Doing so would prevent adequate air supply to the finisher combustion chamber.

IMPORTANT: Provisions must be made for make-up air.

IMPORTANT: Do not obstruct flow of combustion and ventilation air.



WARNING

Do not connect vents together. Gas and ventilation outlets must be separate to prevent fire.

Insulate all ducts to prevent fire.

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IMPORTANT: Using the shortest possible path, connect the exhaust outlet to an outlet duct. For gas models, use two separate outlets.

Exhaust Requirements				
	UL24*118	UL24*130	UL32*118	UL32*118
Vapor Exhaust	530 cfm	530 cfm	820 cfm	820 cfm
Vapor Exhaust (Inches of Water Column)	2.4 in. (60.96 mm)	2.4 in. (60.96 mm)	2.4 in. (60.96 mm)	2.4 in. (60.96 mm)
Exhaust Roll Duct *Maximum length of exhaust pipe is 14 ft. (4.27 m) and 2 90° elbows. *For ducts longer than 15 ft. (4.57 m), use next size larger pipe.	4.75 in. (120 mm)	4.75 in. (120 mm)	6.25 in. (120 mm)	6.25 in. (120 mm)

Table 9

Start-up Procedures

1. Slowly open gas shut-off valve and check machine for leaks.
2. Purge moisture out of machine (Gas and Electric models only). Refer to ***Purging Moisture***.
3. Bake roll padding (Steam models only). Refer to ***Baking of Roll Padding***.

Purging Moisture

At the first heating of the machine, moisture must be purged out of the system. To do this:

1. Take off existing hose. Do not throw away. Refer to *Figure 8*.
2. Connect the teflon hose provided on top of the machine in its place.
3. Place one end of the teflon hose into a tub. Refer to *Figure 9*.
4. Heat the machine fully.
5. Let teflon hose drain into tub.
6. Remove the teflon hose.
7. Replace original hose.

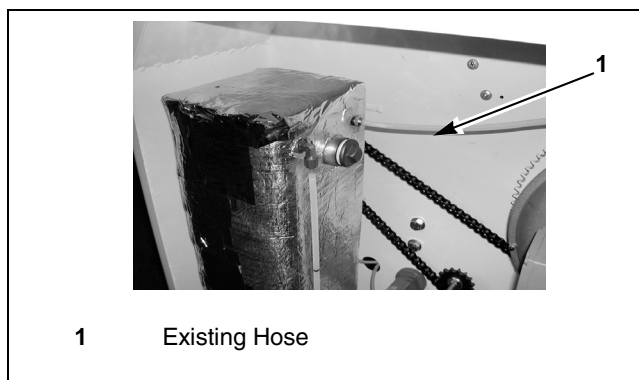


Figure 8

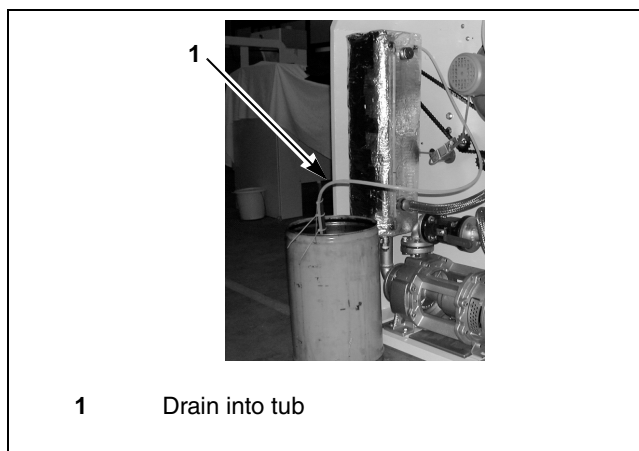


Figure 9

Operation Instructions

Pre-Operation

Daily Check Points

1. Check to ensure all safety guards are in position and closed.
2. Before starting, check that area is free of obstructions that could cause safety issues.
3. Check that there are no foreign objects between the roll and the bed.
4. Check to ensure the opening between the feed band and finger guard is not more than .6 inch (15 mm) and that it is working properly.
5. Check the condition of the padding.
6. If the wire stitching on the padding becomes visible, replace the padding.
7. Check the condition of the feed bands.
8. Clean dust off machine.
9. Check for proper functioning of the emergency stop buttons.
10. Check the machine for leaks.

Operating Instructions

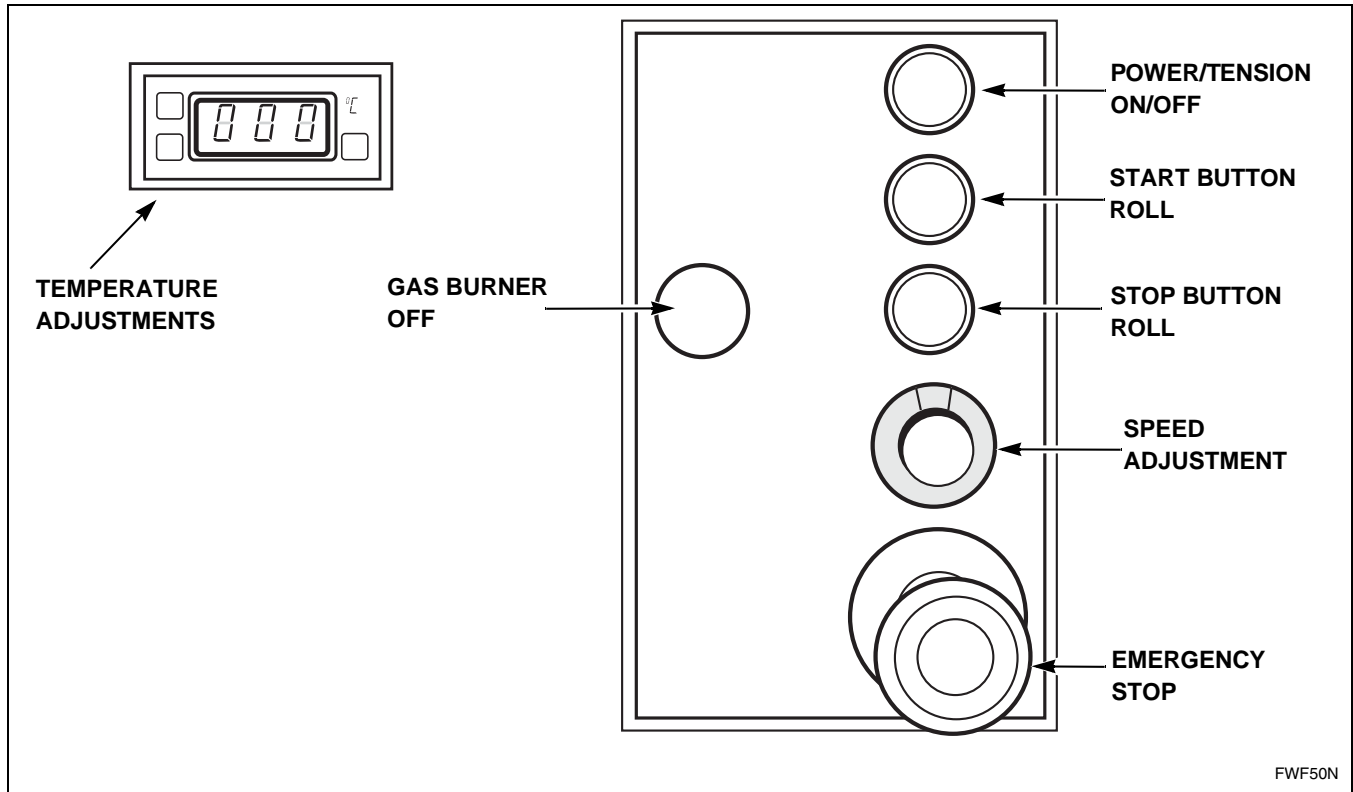


Figure 10

The machine is suitable for ironing linen such as sheets, pillow cases and table linens.

Start

1. Push green "Tension" button: the circulation pump starts to work, the burner starts.
2. Set to desired temperature.

IMPORTANT: The working temperature varies depending on the fabric being ironed. It must be at least 302° F (150°C) but never to exceed 365° F (180° C).

3. Push the green "Start" button to start machine. Green pilot comes on. Bed is pressed against roller, exhaust is started and roll starts to turn. For best results, adjust speed.

Stop

1. Push red "Stop" button. Bed opens and roll stops at once. The machine remains at temperature.

IMPORTANT: When pushing emergency stop button, all motors and the burner are cut off and bed opens automatically. Restarting is only possible by resetting the emergency stop button (turn clockwise) and pushing the power/tension again. Touching the finger guard will stop the roll at once, but temperature will remain constant. To start again, push start button.

IMPORTANT: When the finger guard is tripped the bed remains pressed against the roll. It is strongly recommended to start the roll as soon as possible or to stop the machine completely.

Temperature Setting

NOTE: Set temperature to read in degrees Fahrenheit if desired.

SET: Push to display the set point valve. The set point can be changed with the "UP" or "DOWN" button. The control will automatically switch back to normal operating mode within 3 seconds; the last entered set point will stay in memory.

UP: Used to increase the set point value, as well as the parameter when in programming. Pushing the button for several seconds will accelerate the change rate.

DOWN: Used to decrease the set point valve, as well as the parameter when in programming. Pushing the button for several seconds will accelerate the change rate.

LED "OUT": Status light of the output. Blinks when in setpoint display/change mode or during programming.

Maintenance

General Maintenance

Daily:
<ul style="list-style-type: none"> ● 2 to 4 times a day pass a wax cloth through ironer. ● Check condition of padding.
Every Three Months:
<ul style="list-style-type: none"> ● Clean ventilation caps of drive reduction motor and suction fan. ● Grease bearings with 1-2 pumps of high temperature grease.
Every Six Months:
Check chain tension of feed bands.
Yearly:
Change reduction drive roll oil.
Every 2 Years:
Drain ironing bed oil.
Every 5 Years:
Drain and replace hydraulic pump oil.
Other:
If scale occurs at entrance of beds, clean beds.

IMPORTANT: The maintenance should be done according to the maintenance plan. The manufacturer is not responsible for accidents or defects due to bad maintenance or use of spare parts not delivered from factory.

The possible risks of bad maintenance are:

- Quick wear of bearings and gears by insufficient greasing.
- Heating of the bearings by insufficient greasing can lead to fire.
- If safety devices are not checked daily, it can lead to severe accidents.
- Waiting too long to renew the padding can damage the beds.
- Dust on the machine can lead to fire.
- Worn or missing feed bands can cause a danger for trapped fingers or feeder linens.

Oil Change Maintenance			
	Reduction Drive Roll	Ironing Bed Thermal Oil	Hydraulic Pump
Oil Type	GOYA 220	TEXATHERM HT22	SHELL TELLUS S 68
Maintenance	First drain after 6 months then every year	Every 2 years	Drain every 5 years
Oil Volume	1.2 liter (0.3 gallons)	Gas Models 70 liter (18.5 gallons) Electric Models 120 liters (32 gallons)	2.5 liter (0.7 gallons)

Table 10

Cleaning the Beds

The life of all ironer clothing depends largely on the condition of the beds. A clean smooth bed increases the life of padding and improves the quality of the ironed linen. A typical ironing problem like creasing on the leading edge is almost always due to a dirty bed. Though not always visible, residue and salts will build up on the bed surfaces.

Before cleaning beds, deposit causes should be identified. These are usually found in the washing process:

- Hard water (lime deposit).
- PH value higher or lower than the ideal 6.5.
- High moisture (too much water to evaporate).
- Bad rinsing (soap residuals).

Cleaning Beds

NOTE: Cleaning the beds with abrasive materials may cause damage to the beds.

When there is only build-up at the bed inlet, it can be removed by hand and with Scotch-Brite™. However, when there is build-up on the whole bed:

1. Drop the beds.
2. Let the machine cool down.
3. Wrap a cloth around each roller to protect padding against dust.
4. Wind strips of Scotch-Brite™ around the rollers in wide lanes.
5. Lower hydraulic pressure to 217.5 psi - 290 psi (15 bar to 20 bar).
6. Push the slightly heated beds against the rollers and turn the rollers for 2 to 3 hours.
7. Keep watching to make sure the Scotch-Brite™, does not loosen.
8. Remove all dust, Scotch-Brite™ and cloth.
9. Restore to original hydraulic pressure.
10. Heat the beds and pass a wax cloth to grease the beds.

NOTE: Wax should be applied regularly but sparingly so as not to clog up the clothing suction. Always use a cloth and never apply wax between roll and bed. This may cause spots in the ironed items because padding absorbs wax.



WARNING

On oil heated ironers, too much wax constitutes a fire hazard.

W681

Padding Specification

Material specifications:

Felt thickness: .66 to .70 inch (17 to 18 mm)

Felt weight: .8 lbs/ft² (tolerance of 5% is acceptable)

Air permeability: 18 m³ per m² per minute

Material type:

For steam pressures under 174 psi (12 bar): 100% polyester - single layer felt

Reclothing The Roll

Required materials:

- Set of new clothings
- Stitching wire (.31 inch [0.8 mm]) low heat, softened, pliable, stainless steel wire. Length: twice roller length
- Strong, sharp knife
- Sturdy pliers
- New springs, when needed

To remove old clothing:

1. Lower the beds from the rollers.
2. Remove and retain all brass screws holding the clothing at each end of the roller.
3. Cut away the wire at the seam and retain as a model for stitching new clothing. Clean the rollers.

To check bare rollers:

1. If the surface is uneven, level it off by pulling up or knocking down any distorted springs.
2. Replace any springs that are damaged. Check that the hooks of the springs are all in the same direction.

Maintenance

To install new clothing:

1. Place clothing on last roller.
2. Affix the felt with one screw at each end of the roller. Do not trim off the sides yet.
3. Tie the leading edge of the felt to the springs every 12 inches (300 mm) using wire. These must remain until clothing is stitched, then they should be cut and removed.
4. Repeat the procedure to each subsequent roller as described in 1, 2 and 3 above.
5. Wrap a cloth around the leading edge of the new felt to protect it.
6. Turn the roller one third of a revolution until the leading edge of the felt is in the bed.
7. With the pressure set at 284.47 lb./in² (20 kg/cm²), raise the beds of the felt to meet at the top of the roller.
8. Firmly tension the felt over the whole length of the trailing edge with a strong pair of pliers.
9. With a strong sharp knife, cut away any excess felt across the whole width of the roller (cut short so that a 3/4 inch gap remains between first and last edge).
10. Stitch the clothing.

To stitch new clothing:

1. Make a small noose at the end of the wire.
2. Insert the needle into the clothing and pass it through the noose to secure an end.
3. Draw wire into felt by making a shallow cut .07 to .11 inch (2 to 3 mm deep) into felt and allow wire to sink into the cut. The wire should not pop out anywhere.
4. By hand, stitch 20 inches (508 mm) leaving approximately 1-1/4 inch (30 mm) between stitches. Then draw up the wire firmly into the clothing, at the same time hammering wire into felt.
5. Finish at the ends by making a cross stitch. Continue stitching over the remainder of the clothing in the same method.
6. Lower the beds.

NOTE: Never turn the rollers in cold beds!

7. Trim off the felt around circumference of rollers at each end (cut off overlapping felt at each side of the roller).

8. Make holes in the felt and screw the felt down around the rollers at both ends using screws retained from the old clothing.
9. Tension the clothing.

Baking of Roll Padding

IMPORTANT: DO NOT turn rolls in cold beds. DO NOT turn rolls in the beds before the baking.

1. Open the beds and visually divide the roll in four parts.
2. Remove wax paper from rolls.
3. Ungrease and clean beds.
4. Heat beds to working temperature.
5. Adjust the hydraulic pressure regulation valve to proper setting. Refer to *Table 11*.
6. Press beds against 1/2 of roll for about 15 minutes, at appropriate hydraulic pressure. Refer to *Table 11*.
7. Open beds and turn roll 1/2 revolution (180°). Press beds against roll again for 15 minutes.

NOTE: To turn roll with open beds, a special switch in electrical box is used.

8. Open beds and turn roll 1/4 revolution (90°). Press beds against roll again for 15 minutes.
9. Repeat Step 7 seven more times so baking takes 2 1/2 hours total.
10. Open beds and set pressure regulation valve to proper setting. Refer to *Table 11*.
11. Wrap a sheet around roll. Press beds against roll and turn for about 15 minutes.

NOTE: During turning, put some wax at bed entrance between roll and bed. Open beds and remove sheet.

12. Adjust scrapers. Refer to *Figure 12*.

NOTE: While ironing, if padding becomes loose, stop roll, open beds and turn loose part down. Press beds against roll for 15 minutes. DO NOT TURN ROLL.

NOTE: This procedure should be repeated when replacing roll padding on any machine.

Hydraulic Pressure Settings

To adjust hydraulic pressure:

- 1. Remove cap from side of hydraulic pump. Refer to *Figure 11*.

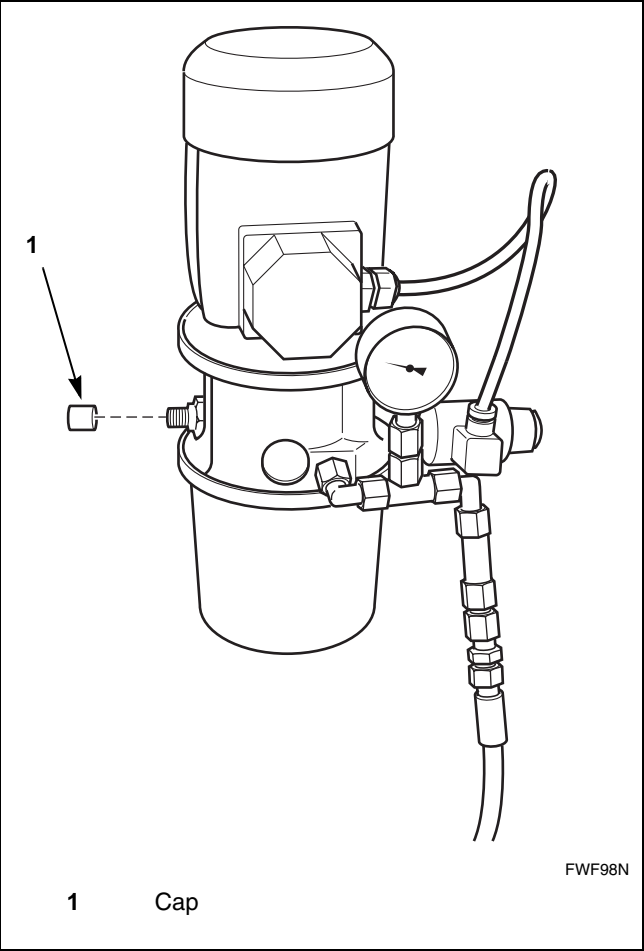


Figure 11

- 2. Using a 4 mm Allen Wrench, adjust screw as follows: turn clockwise (up) to increase hydraulic pressure, turn counter clockwise (down) to decrease hydraulic pressure.
- 3. Reinstall cap.

Baking		Starting		After 10 Days	
PSI	Bar	PSI	Bar	PSI	Bar
508	35	290	20	363	25

Table 11

Scrapers

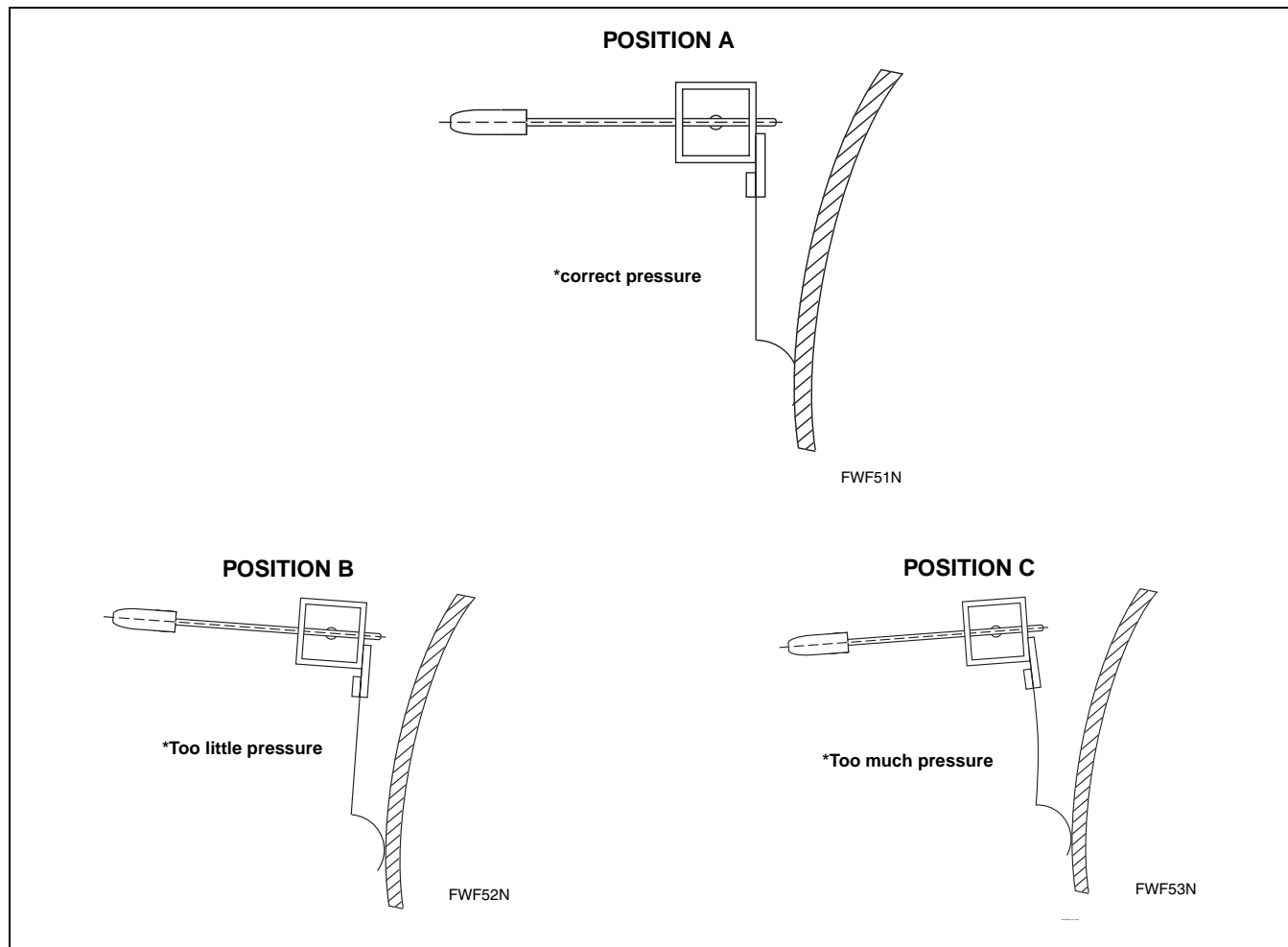


Figure 12

Extended Periods of Non-Use

1. Let the padding dry out.
2. Wrap plastic around roller(s).
3. Grease the beds with some oil to prevent rusting by feeding an oil cloth.
4. Keep carrying out the annual maintenance (oil change, greasing, etc.).
5. Before starting the ironer again, clean the beds.

Troubleshooting

Troubleshooting Guide

Problem	Cause	Solution
1. The machine does not reach its temperature (Gas Models).	<ol style="list-style-type: none"> 1. Fuses tripped. 2. Thermal safety fallen out. 3. No gas. 4. Power/tension button. 5. Gas ignition tripped out. 	<ol style="list-style-type: none"> 1. Replace fuse. 2. Push thermal fuse. 3. Check gas input. 4. Replace power/tension button. 5. Push safety gas ignition.
2. Machine starts to heat, but gas ignition goes into safety mode.	<ol style="list-style-type: none"> 1. No gas. 2. Bad suction of the gases. 3. Ionization bar out of order. 4. Pressure bar out of order. 5. Gas valve out of order. 	<ol style="list-style-type: none"> 1. Check gas input. 2. Check gas inlet. 3. Ionization bar. 4. Check or change pressure gas valve. 5. Change the gas valve.
3. Machine is at temperature but the bed does not close.	<ol style="list-style-type: none"> 1. Green start button out of order. 2. Motor out of order. 	<ol style="list-style-type: none"> 1. Replace green start button. 2. Check motor print C2.
4. The bed closes but the roll does not turn.	<ol style="list-style-type: none"> 1. Foot pedal (option) pushed. 2. Finger guard pushed. 3. Frequency control out of order. 	<ol style="list-style-type: none"> 1. Check or replace contact F.D.C4 (option). 2. Check or replace contact F.D.C2. 3. Change frequency control.
5. Roll suction does not work.	<ol style="list-style-type: none"> 1. Motor out of order. 2. Contactor out of order. 	<ol style="list-style-type: none"> 1. Replace motor. 2. Replace contactor C3.
6. No power.	<ol style="list-style-type: none"> 1. Safety out of order. 2. Main switch out of order. 3. Fuses out of order. 	<ol style="list-style-type: none"> 1. Push motor safeties. 2. Replace main switch. 3. Replace fuses.
7. Creases in the linen.	<ol style="list-style-type: none"> 1. Temperature of the bed is too low (under 302°F [150°C]). 2. Bed is dirty. 	<ol style="list-style-type: none"> 1. Adjust higher working temperature (normally 338°F [170°C]). 2. Clean and wax bed.
8. Bad combustion of the gases.	<ol style="list-style-type: none"> 1. Gas pressure is too high. 2. Gas valve is badly adjusted. 	<ol style="list-style-type: none"> 1. Adjust gas pressure to 13 mbar (0.2 psi). 2. Adjust gas valve. Contact technical service for instruction.

Troubleshooting Undesirable Finishes

Problem:	Possible Causes/Corrective Action:
Wrinkles in the fabric are not removed.	There is not enough moisture in the fabric. Dry fabric cannot be ironed.
The fabric is not completely dry.	<ol style="list-style-type: none"> 1. The roll temperature is too low. Try a higher temperature, but do not exceed the maximum temperature tolerance of the most sensitive fiber. 2. The feed speed is too fast. Adjust the speed so the fabric is dry after one pass. 3. The fabric moisture content is too high. <ol style="list-style-type: none"> a. Provide a longer washer extraction time. b. Provide a higher washer g-force extraction speed. c. Partially dry (in a tumbler) the linen before finishing.
There are lengthwise wrinkles in the fabric.	The operators must stretch the fabric side to side during the feed process.
There are crosswise wrinkles in the fabric.	<ol style="list-style-type: none"> 1. There is insufficient wax on the shoe. 2. The return ribbon travel is uneven. <ol style="list-style-type: none"> a. The return drive roll could be slipping on the ribbons. This could be caused by the presence of fabric softener on the roll. Fabric softener should not be used on fabrics that will be ironed. b. The ribbon length is uneven. Uneven length ribbons will not drive the roll evenly.
Only a few articles can be ironed before the finish quality deteriorates. The operators must wait a few minutes before proceeding in order to process linen to the proper finish.	<ol style="list-style-type: none"> 1. There is too much water in the fabric. Large articles with excessive water content will remove a great amount of heat from the roll or shoe. This will reduce the roll or shoe temperature below that required to obtain an acceptable dry and finish. In order to compensate the operators may set the temperature too high. This may scorch the first items and can also damage the mechanical and electrical systems of the finisher. 2. The feeder speed is too fast. Slow down the feed speed.
There is color or staining on the finished material.	The wash process has not cleaned the fabric. Impurities such as soil, minerals, sour or detergent may still be present in the fabric. Since only the water is removed from the fabric during the finishing process, any impurities will remain as a deposit on the linen or finisher surfaces.
The fabric is scorched.	<p>The roll or shoe temperature is too high. Reduce the temperature.</p> <p>NOTE: The entire width of the finisher should be used to prevent overheating the unused surface. Small articles should be processed in a pattern that utilizes the entire width.</p>